

### **REMARKS**

Claims 1-21 are pending in this application.

The Office Action dated July 13, 2005, has been received and carefully reviewed. Each issue raised in that Office Action is addressed below. Reconsideration and allowance of claims 1-21 is respectfully requested in view of the above amendments and following remarks.

### **STATEMENT OF SUBSTANCE OF INTERVIEW**

Applicant's representative, Scott Wakeman, met with the examiner on November 2, 2005, to discuss the July 13, 2005, Office Action. Claims 1 and 21 were discussed, as were the Discenzo and Kurishige references. No exhibits were shown.

With regard to the drawings, the examiner maintained that Figure 1 must be labeled "Prior Art" because the drawing is identical to a drawing in an earlier reference. Applicant's representative explained that "main controller 4" in the present application is different than the "main controller 4" of the other reference and that it would therefore be improper to label Figure 1 "prior art." The examiner advised that 1) she would discuss this issue with her supervisor when a Reply was filed and 2) she would withdraw this requirement if Figure 1 were amended to make it different in some manner from the figure in the prior art application.

The examiner agreed that a vehicle did not need to be shown in the drawings and that the language "vehicle running speed" in the claims was supported by the specification.

The different systems shown in Discenzo and Kurishige were discussed. Applicant's representative submitted that nothing in the prior art suggested the modification to Discenzo that was proposed in the Office Action.

### **DRAWINGS**

The Office Action requires that Figure 1 of the drawings be labeled "prior art." However, as discussed during the interview, Figure 1 illustrates the present invention – at least controller 4 is new and inventive and does not constitute prior art. Therefore, it is respectfully submitted that in the present case it would be improper to label Figure 1 as prior art.

The examiner argued that Figure 1 appears in a prior publication and that this makes the

figure prior art. However, it is respectfully submitted that what would be understood from this figure must be considered rather than whether the same figure appears in two references. The fact that the main controller 4 in the prior reference and the main controller 4 in the present application are shown as rectangular boxes does not make them identical. They are, in fact different as described in the specification. Figure 1 is not provided merely to show the state of the art before Applicant's invention – it is provided to explain the claimed invention.

The legend “prior art” may be required when “only what is old” is illustrated. In the present case, at least main controller 4 is not old. The description makes clear that controller 4 is not the same as the controller 4 of the earlier application. For this reason, it is respectfully submitted that Figure 1 does not require and cannot properly be labeled “prior art.” The requirement that Figure 1 be labeled “prior art” is therefore again respectfully traversed.

It was agreed during the interview that it is not necessary to show a vehicle in the drawings.

#### SPECIFICATION

It was agreed during the interview that the specification provides support for the language “vehicle running speed” in the claims.

#### REJECTIONS UNDER 35 U.S.C. 102(b)

Claims 1, 2, 9 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Nishizaki. The basis for this rejection was apparently the use of the language “capable of” in these claims. By the above amendment, claims 1, 2 and 9 have been amended to remove this language. Nishizaki does not show all elements required by these amended claims, and, as discussed during the interview, these amendments should overcome the rejection based on Nishizaki.

#### REJECTIONS UNDER 35 U.S.C. 103(a)

Claim 1 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Discenzo in view of Kurishige. It is respectfully submitted that 1) a proper motivation for combining these

references has not been identified and 2) that even if the references could somehow be combined, the result would not be the invention required by claim 1.

First, the Office Action indicates that it would have been obvious to combine the references “in order to provide an assist torque to the motor.” However Discenzo is not related to the concept of “assist torque.” “Steering assist” as used in Kurishige relates to a traditional power steering system where a motor is used to make a steering wheel easier to turn. In the steer-by-wire system of Discenzo, there is no mechanical connection between the steering wheel and the vehicle wheels. Therefore a person of ordinary skill in the art would have no reason to attempt to somehow use Kurishige’s assist torque in the system of Discenzo. For this reason, a motivation to make the proposed combination of references has not been identified, a *prima facie* case of obviousness has not been presented, and claim 1 is submitted to be allowable over the references of record.

Furthermore, claim 1 requires a vehicle steering apparatus that includes a steering motor for supplying a steering mechanism with steering force corresponding to a steering amount applied to a steering member. The apparatus includes a reaction force motor, a current sensor for detecting a motor current of the steering motor and a controller. The controller extracts a component with a predetermined frequency range out of the motor current detected by the current sensor and drives the reaction force motor so as to supply the steering member with steering reaction force corresponding to the extracted component and steering reaction force corresponding to the steering amount.

Discenzo discloses a steer-by-wire system that includes a torque sensor for detecting torque at a gear box. The detected torque is used by a road feel computer to control a steering wheel servo motor 38 to apply forces to the steering wheel to simulate the feel of a steering wheel connected directly to a steering mechanism. The Office Action acknowledges that Discenzo does not teach a controller extracting a component out of motor current as claimed. However, the Office Action asserts that it would have been obvious to sense a motor current instead of using a torque sensor based on the teachings of Kurishige.

Kurishige is a power assist device for a power steering system that uses a current control feedback loop to keep the current supplied to a motor at a commanded level. Kurishige is not a

steer-by-wire system and is unrelated to the concept of providing road feel to a user. Kurishige in no manner suggests that Discenzo's torque sensor can be removed or that anything other than the output of torque sensor 36 can be used in Discenzo to control servo motor 38. For these reasons as well, it is submitted that claim 1 patentably distinguishes over this reference.

Claims 2-10 depend from claim 1 and are submitted to be allowable for the same reasons as claim 1.

Claim 11 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Discenzo in view of Kurishige. Claim 11 is submitted to distinguish over the references of record for the same reasons provided above in connection with claim 1. Claims 12-20 depend from claim 11 and are submitted to be allowable for the same reasons as claim 11.

Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Discenzo in view of Kurishige. Claim 11 is submitted to distinguish over the references of record for the same reasons provided above in connection with claim 1.

### CONCLUSION

Each issue raised in the Office Action dated July 13, 2005, has been addressed, and it is believed that claims 1-21 are in condition for allowance. Wherefore, reconsideration and allowance of these claims is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Scott Wakeman (Reg. No. 37,750) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

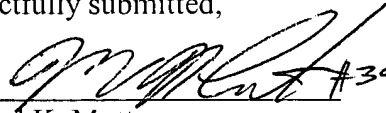

Application No. 10/694,884  
Amendment dated November 14, 2005  
Reply to Office Action of July 13, 2005

Docket No.: 1560-0401P

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: November 14, 2005

Respectfully submitted,

By  #39,491  
Michael K. Mutter  
Registration No.: 29,680  
Scott T. Wakeman   
Registration No.: 37,750  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorneys for Applicant